

RestorationPlus: A Collaborative Environmental Protection Agency Research Program to Develop and Evaluate Ecosystem Restoration and Management Options to Achieve Ecologically and Economically Sustainable Solutions

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The U.S. Environmental Protection Agency (U.S. EPA) is evaluating ecosystem restoration and management techniques to ensure they create sustainable solutions for degraded watersheds. The ORD/NRMRL initiated the Restoration Plus (RePlus) program in 2002, which emphasizes collaborative efforts to (1) evaluate ecosystem restoration and management options, (2) assess the non-monetary and economic benefits of restoration, and (3) develop and evaluate strategies for use by watershed managers and others to make appropriate restoration and management choices where those choices have to incorporate community-based socioeconomic decisions and political realities. This poster describes three RePlus collaborative research projects. The first is the development and testing of a Geographic Information System (GIS) ecosystem restoration prioritization framework for the Mid-Atlantic Highlands (MAH), which partners the U.S. EPA with the Canaan Valley Institute (CVI), a nonprofit organization that fosters local decision-making in support of sustainable resource use and management in the MAH. This framework is an extension of watershed mapping and classification methods developed in a recent Pennsylvania State University Science to Achieve Results (STAR) grant. The second is a collaborative research effort between the U.S. EPA, CVI, and West Virginia University on the development of techniques for valuation of non-monetary restoration benefits using both benefits transfer and hedonic price methods. The third is the assessment of the use of an auction/bidding system as an incentive for implementation of on-lot stormwater best management practices (BMPs) in a residential neighborhood that involves partnering with state, county, and local governments. RePlus research is targeted to demonstrate proof-of-concept integrated assessments for allocation of environmental management resources within the context of socioeconomic factors and ecological integrity. Planned RePlus products, such as the GIS restoration prioritization tool, and a West Virginia University Press book titled *Environmental Economics for Watershed Advocacy Groups: Natural Resource Valuation You Can Use* will enable watershed stakeholders and decision-makers to select and implement sustainable watershed management and restoration decisions.